Administration Report of the Public Works Department in the Bombay Presidency for the Year 1933-34

With a detailed review of the Civil and Military Works

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1935

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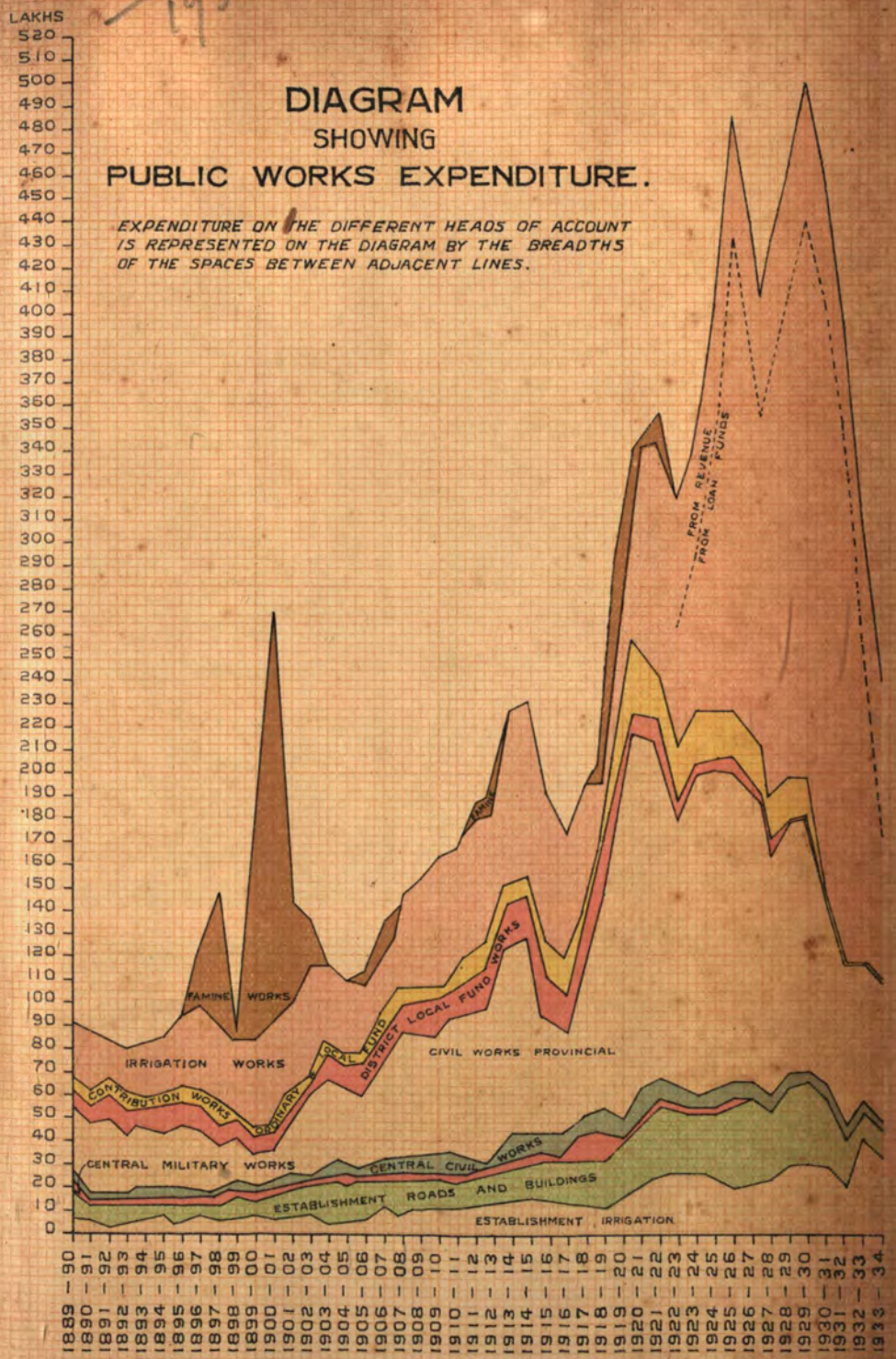
on 22 July, 2017

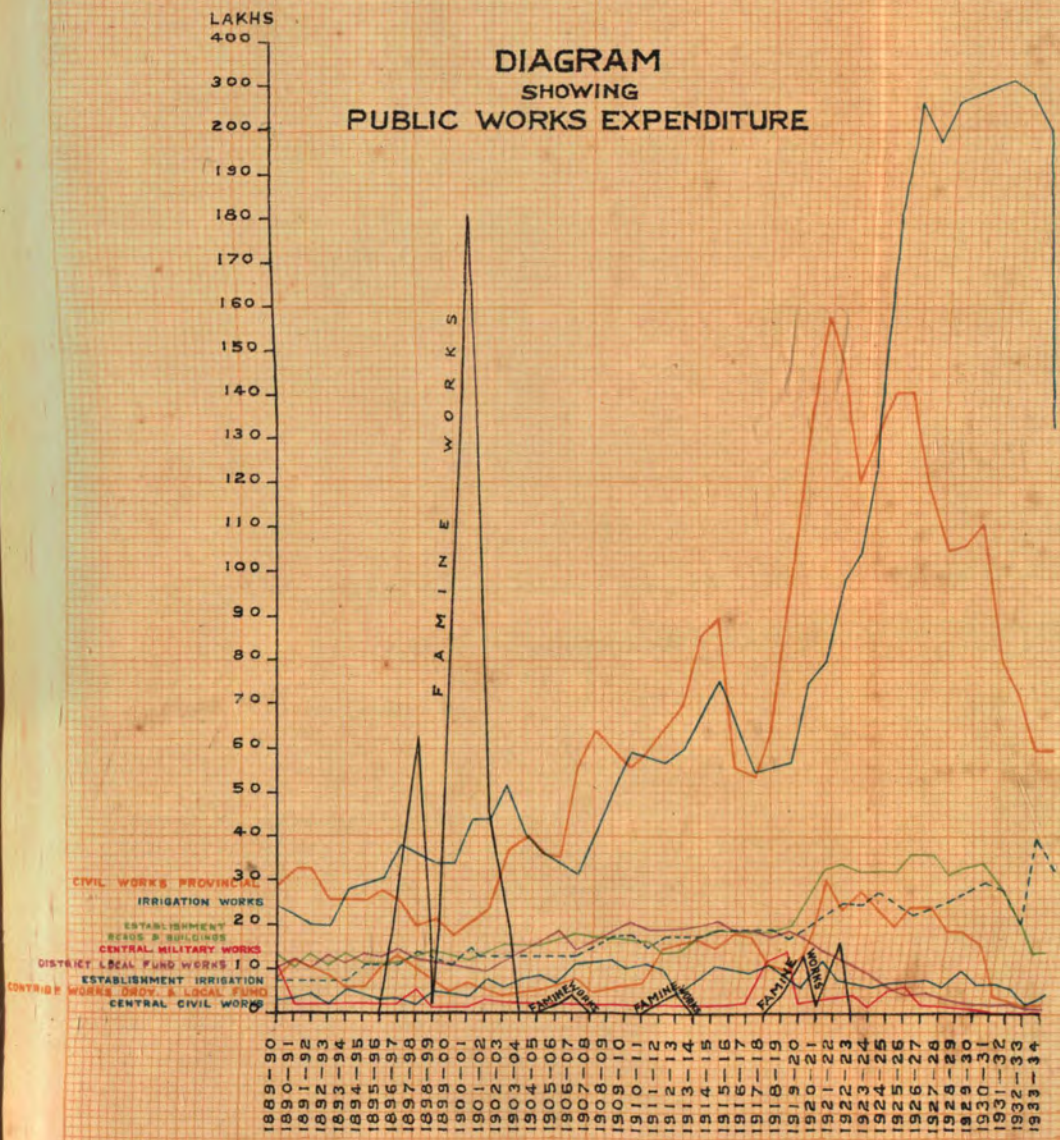
1935

DIAGRAM
SHOWING
PUBLIC WORKS EXPENDITURE.

EXPENDITURE ON THE DIFFERENT HEADS OF ACCOUNT IS REPRESENTED ON THE DIAGRAM BY THE BREADTHS OF THE SPACES BETWEEN ADJACENT LINES.



(L) G.P.Z.O. Poona, 1935.



G.P.O. Poona, 1935

DIAGRAM

SHOWING

EXPENDITURE ON IRRIGATION WORKS

IN THE PUBLIC WORKS DEPARTMENT

FROM

LOAN FUNDS, REVENUE & CONTRIBUTION

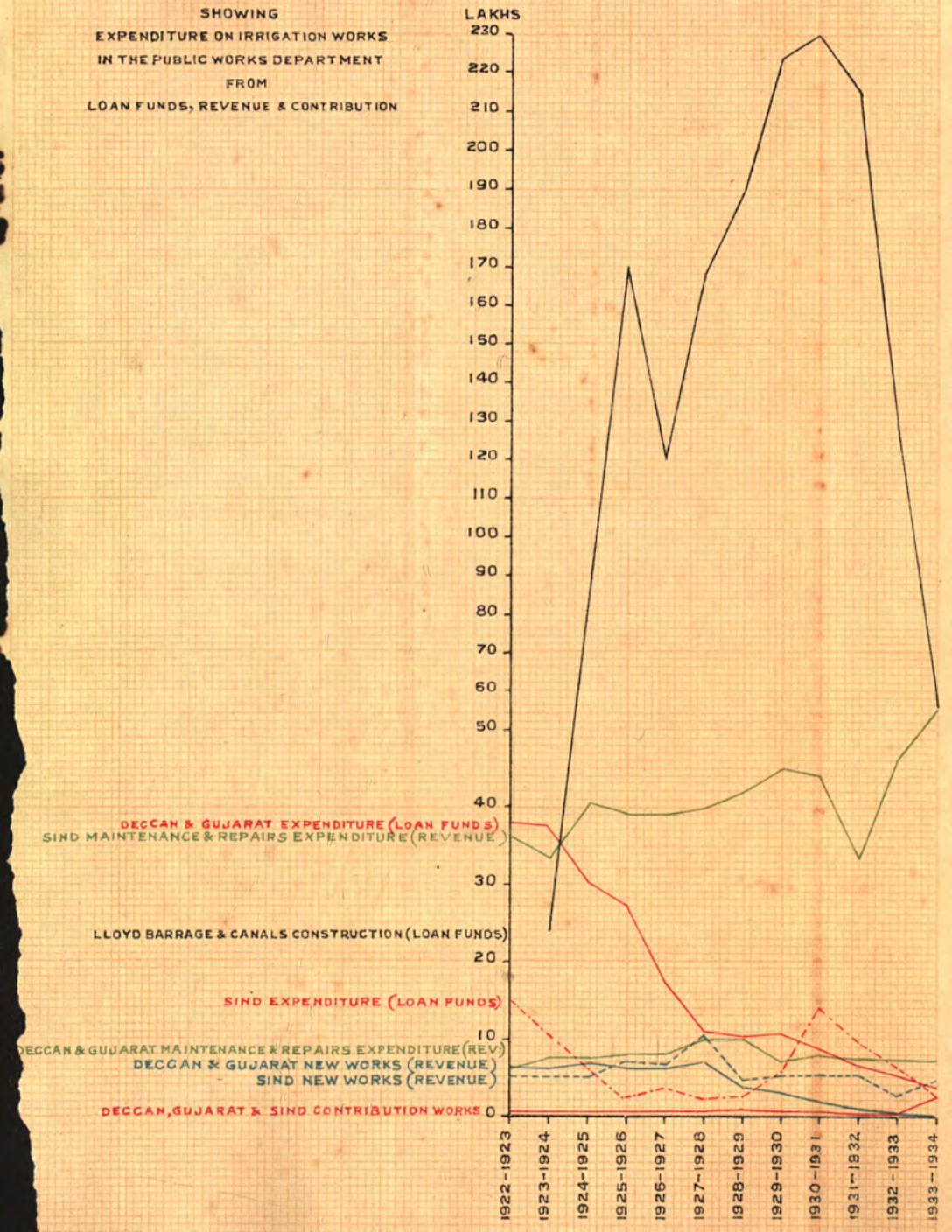
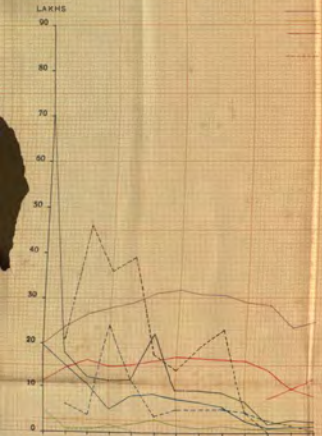


DIAGRAM SHOWING EXPENDITURE ON PROVINCIAL BUILDINGS AND ROADS
IN THE
PRESIDENCY PROPER AND SIND.

Represents 41 C.W. Expenditure on Buildings for Original Works.
" 60 " " " " " " "
" 41 " " " " Maintenance
" 41 " " Metalled Provincial Roads for Original Works
" 60 " " " " " "
" 41 " " Unmetalled " " "
" 60 " " " " " "
" 41 " " Metalled " " Maintenance
" 41 " " Unmetalled " "
" 41 " " from Development Fund Provincial Roads for Original Works
" 41 " " " " " Maintenance

PRESIDENCY PROPER.



SIND.

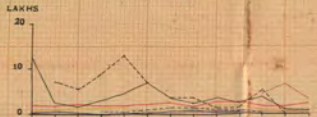
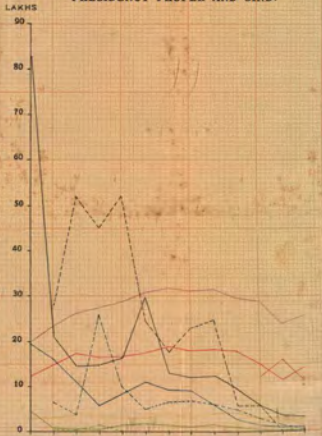


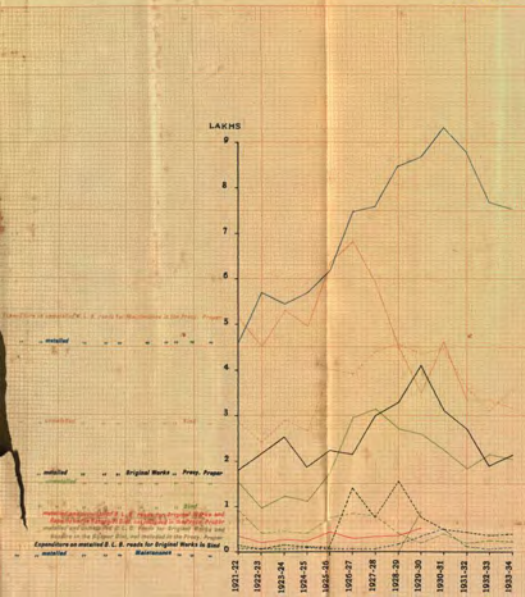
DIAGRAM SHOWING TOTAL EXPENDITURE IN THE PRESIDENCY PROPER AND SIND.

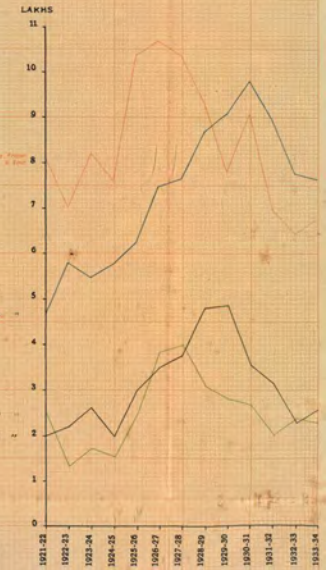


(L 250) G. P. S. Press, 1935

DIAGRAM SHOWING THE EXPENDITURE ON D.L.B. ROADS IN THE PRESIDENCY PROPER AND SIND.

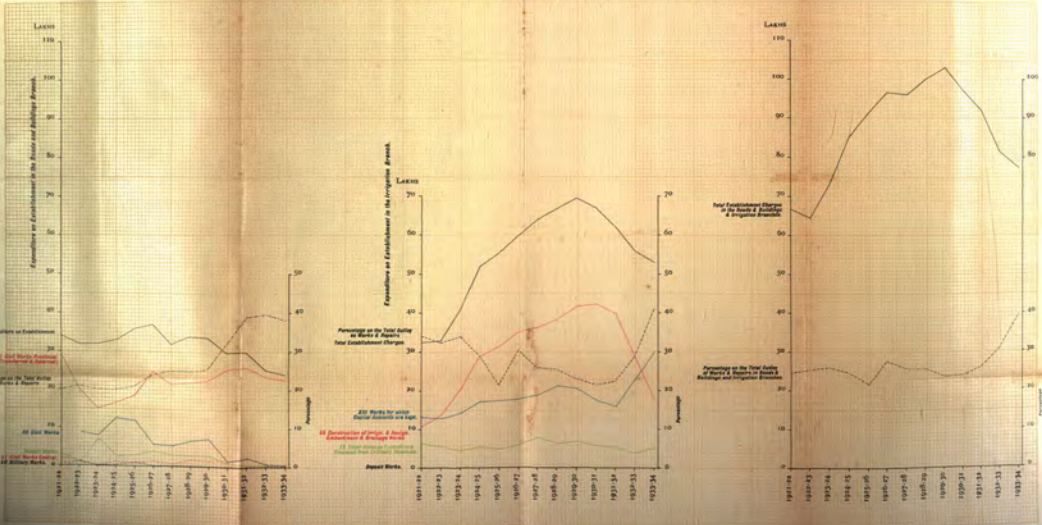
(ORIGINAL WORKS AND REPAIRS)





(L.233) B. P. I. S. Press, 1935

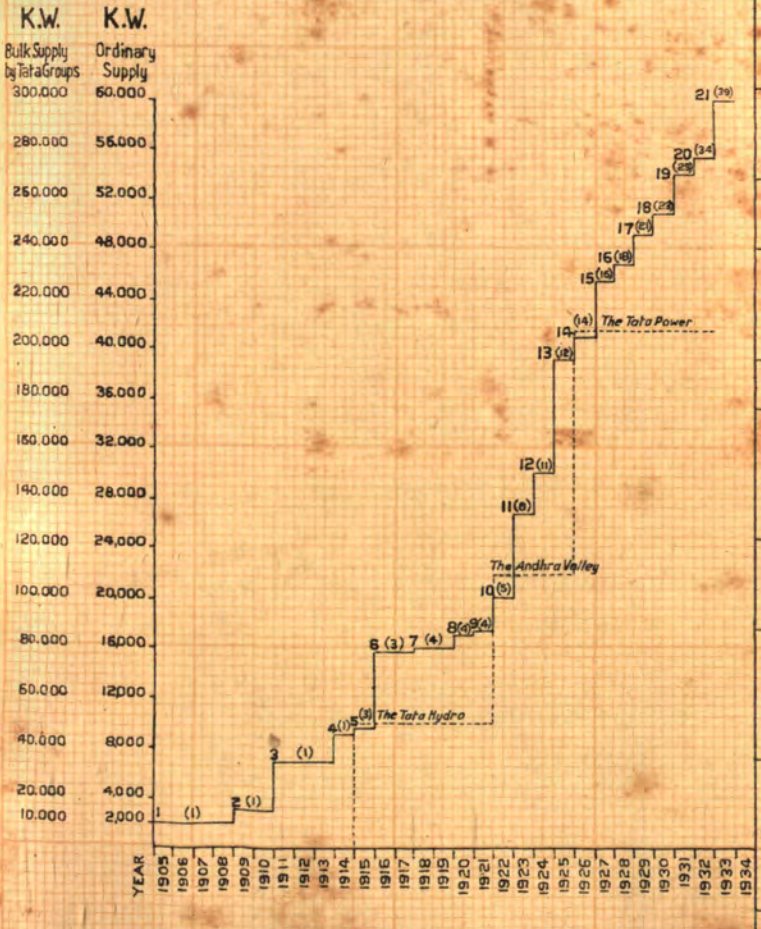
DIAGRAM SHOWING EXPENDITURE
ON ESTABLISHMENT
IN THE
ROADS & BUILDINGS & IRRIGATION BRANCHES
OF THE
PUBLIC WORKS DEPARTMENT
AND
PERCENTAGES TO THE TOTAL OUTLAY ON WORKS AND REPAIRS



Govt. Photozincographic Depr., Poona, 1924.

GRAPH
SHOWING THE PROGRESS OF ELECTRICAL DEVELOPMENT IN TERMS OF KILOWATTS INSTALLED FROM 1905 TO DATE BY VARIOUS SUPPLY COMPANIES IN THE BOMBAY PRESIDENCY

NOTE ~ Dotted line shows Tata Groups Bulk Power Supply.
Full line shows total of ordinary Supply.
Figures in Brackets, thus (4) show the number of Companies, excluding the Tata Groups in operation at the end of each year.



10-9-34

Electrical Engineer to Government
P.W.D. Bombay.

INCREASE DUE TO		
Ref No	Increase of load old Supply Co:	Start of new Supply Co:
1		Bombay El.S.T.
2	Bombay El.S.T.	
3	Bombay El.S.T.	
4	Bombay El.S.T.	
5		Ahmedabad Karachi
6	Bombay El.S.T.	
7	Ahmedabad	Poona
8	Ahmedabad Karachi Poona	
9	Karachi	
10	Bombay El.S.T. Poona	Surat
11	Bombay El.S.T. Ahmedabad Poona	Godhra Hyderabad Sukkur
12	Ahmedabad Karachi Poona Hyderabad Sukkur	Broach Gadag and Betigeri. Shikarpur
13	Bombay El.S.T. Ahmedabad Poona Hyderabad	Sholapur
14	Poona Sukkur Broach	Rander Aden
15	Bombay El.S.T. Poona Surat Hyderabad Sukkur	Bhiwandi Hubli
16	Karachi Surat	B'bay Suburn Thana
17	Bombay El.S.T. Surat Hyderabad Broach Shikarpur B'bay Suburn	Lonavla – Khandala Kalyan Bijapur
18	Poona Sukkur Rander B'bay Suburn	Panvel Dharwar
19	Bombay El.S.T. B'bay Suburn Bhiwandi Ahmedabad Godhra Panvel	Pandharpur Panchagani Matheran Larkhana Jalgaon Nasik-Deolali
20	B'bay Suburn Kalyan Rander Pandharpur Bijapur Matheran Sukkur (Reducts)	Dhulia Ahmednagar Amalner Nadiad Belgaum
21	Bombay El.S.T. B'bay Suburn Thana Bhiwandi Surat Lonavla Dhulia Ahmednagar Hubli Bijapur Matheran Karachi Hyderabad	Bulsar Yeola Baramati Barsi Mirpurkhas

G.P.O. POONA. 1934

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1933

PUBLIC WORKS DEPARTMENT.

BOMBAY PRESIDENCY

ADMINISTRATION REPORT WITH A DETAILED REVIEW OF THE CIVIL AND MILITARY WORKS FOR 1933–34.

I—DIRECTION.

During the year under report, Mr. C. M. Lane, I.S.E., continued as Chief Engineer (Irrigation) and Secretary to Government, and Mr. P. L. Bowers, C.I.E., M.C., A.M.Inst.C.E., as Officiating Chief Engineer (Roads and Buildings) and Joint Secretary to Government until 31st October 1933. As a result of a recommendation of the Reorganisation Committee, the posts of Chief Engineer (Irrigation) and Secretary to Government and Chief Engineer (Roads and Buildings) and Joint Secretary to Government in the Public Works Department were, subject to the sanction of the Secretary of State, amalgamated with effect from the 1st November 1933, the date on which Mr. Bowers, Officiating Chief Engineer (Roads and Buildings) and Joint Secretary, proceeded on leave preparatory to retirement, and with effect from that date, Mr. Lane held the combined post of Chief Engineer and Secretary to Government, Public Works Department.

The post of Deputy Secretary to Government, Public Works Department (Irrigation and Railways), was temporarily held in abeyance with effect from 8th April 1933, when Mr. T. A. Andrew, I.S.E., proceeded on leave, and was revived on 1st November 1933 from which date the two posts of Chief Engineer, Irrigation and Chief Engineer, Roads and Buildings, were amalgamated. Mr. J. R. Phillips, I.S.E., took charge of the duties of Deputy Secretary (Irrigation and Railways), with effect from 1st November 1933.

II—ADMINISTRATIVE MEASURES.

2. The services of Mr. R. B. MacLachlan, I.S.E., Officiating Superintending Engineer in Sind, were placed at the disposal of the Government of India as a Member of the Sind Administrative Committee.

3. As a result of the recommendations of the Reorganisation Committee, the following orders were issued :—

(1) The Architectural Branch of the Public Works Department was closed with effect from 1st August 1933 and Mr. A. J. A. Illingworth, Consulting Architect to Government, was granted leave from that date, his services being terminated on the expiry thereof.

(2) It was decided that the Electrical Branch of the Public Works Department should be retained but that it should be reorganised with some reduction in the gazetted and non-gazetted staff and menial establishment, which reduction was estimated to result in an approximate annual saving of Rs. 44,000. Consequently Mr. W. L. Stevenson,

a Specialist Officer, who was in charge of the duties of the Electrical Inspector in Sind, was granted leave with effect from 1st October 1933, his services being terminated on the expiry of that leave.

(3) The post of the Junior Assistant Secretary to Government, Public Works Department, which was held in abeyance with effect from 1st March 1933, was abolished with effect from 1st September 1933.

(4) The reduction of one of the two posts of Assistant Engineers attached to the Public Works Department Secretariat, which was effected temporarily from 1st April 1932, was confirmed as a permanent measure of retrenchment with effect from 1st November 1933.

4. Three graduates from the College of Engineering, Poona, and the N. E. D. Civil Engineering College, Karachi, were appointed as "Candidates" in the Bombay Service of Engineers.

III—TERRITORIAL CHANGES.

Divisional Charges.

5. The continuance of the following Divisions was sanctioned up to the dates mentioned against each :—

Nira Right Bank Canal Division ..	28th February 1935.
Irrigation Research Division ..	28th February 1935.
Barrage Division	28th February 1935.
Plant Division	28th February 1935.

6. The Nara Supply Division in the Eastern Sind Circle ceased to exist as a separate Divisional charge with effect from 28th April 1933 (A.N.)

7. A new Division, known as the Drainage Division, with headquarters at Sukkur, and comprising 4 Sub-divisions, was created. This Division being on temporary basis, was sanctioned up to 31st March 1934, and it was placed under the direct control of the Chief Engineer in Sind, while the following sub-divisions, which were already in existence, were absorbed in the Drainage Division :—

(1) Drainage Sub-division (opened from 1st April 1933).
(2) Drainage Experimental Sub-division (opened from 5th July1933).
(3) Right Bank Drainage Sub-division (opened from the 12th July 1933).

Sub-Divisional Charges.

8. The marginally noted three temporary Sub-divisions of the late Special Irrigation Division were abolished with effect from the 15th April 1933. The following three Sub-divisions were formed in the Irrigation Research Division, on a temporary basis and with effect from the same date and were sanctioned up to 28th February 1934 :—

(1) Baramati Development Sub-division.
(2) Kopargaon Development Sub-division.
(3) Mutha Right Bank Canal Development Sub-division.

(1) Hydro-dynamic Research Sub-division.
(2) Baramati Research Sub-division.
(3) Kopargaon Research Sub-division.

9. The Baramati Experimental Salt Area Sub-division and the Effluent Farm Development Sub-division at Hadapsar, which were abolished with effect from 1st July 1933, were reconstituted in the Irrigation Research Division and the latter Sub-division was re-named the " Hadapsar Effluent Experimental Area Sub-division ".

10. The five Sub-divisions mentioned in paragraphs 8 and 9 above were ordered to be continued up to 28th February 1935.

11. The continuance of the following five Sub-divisions in the Nira Right Bank Canal Division up to 28th February 1935 was sanctioned :—

(1) Malsiras Sub-division.
(2) Velapur Sub-division.
(3) Mohod Sub-division.
(4) Bhatghar Sub-division.
(5) Phaltan Sub-division.

12. The Bombay Government House Sub-division in the Presidency Division of the Northern Circle was combined with the Government House Sub-division, Ganeshkhind, in the Poona Division of the Central Circle with effect from 18th April 1933, and the enlarged Sub-division was named " Government House Sub-division " with headquarters alternately in Poona and Bombay.

13. The works, etc., in the Sholapur and Shetphal Sub-divisions of the Sholapur Division were redistributed and the reconstituted Shetphal Sub-division was named the " Barsi Sub-division " with headquarters at Barsi.

SIND.

14. The following Sub-divisions in Sind were opened and abolished, respectively, during the year 1933–34 :—

Name of Sub-division.	Name of Division.	Date of opening.
	Sub-divisions opened.	
1. Drainage Experimental Sub-division.	Drainage Division (now known as the Right Bank Drainage Division).	5th July 1933.
2. Right Bank Drainage Sub-division No. 1.	Do. do. ..	12th July 1933.
3. Bund Sub-division ..	Warah Division ..	25th September 1933.
4. Chang Sub-division ..	Nasir Division ..	1st October 1933.
5. Masu Sub-division ..	Hyderabad Division ..	1st October 1933.
6. Mushaik Hoti Sub-division.	Halla Division ..	1st December 1933.
7. Sub-division No. V ..	Manchar Drainage Division ..	3rd January 1934.
8. Right Bank Drainage Sub-division No. II.	Drainage Division (now known as the Right Bank Drainage Division).	3rd January 1934.

Name of Sub-Division.	Name of Division.	Date of closure.
	Sub-divisions closed.	
1. Sub-division No. I ..	Nara Supply Division ..	28th April 1933.
2. Nara Cut Sub-division..	Nara Supply Division ..	28th April 1933.
3. Sukkur Sub-division ..	North Western Canal Division.	30th April 1933.
4. Sub-division No. VII ..	Hyderabad Division ..	30th September 1933.
5. Sub-division No. VIII..	Nasir Division ..	30th September 1933.
6. Roads and Bunds Sub-division.	Dad Division ..	30th November 1933.

One hundred and six Sub-divisions existed in Sind on 31st March 1934.

Miscellaneous.

15. The Poona Water Works Division was transferred from the control of the Superintending Engineer, Central Circle, to that of the Superintending Engineer, Deccan Irrigation Circle, with effect from 1st August 1933.

16. The temporary appointment of the Special Officer attached to the office of the Chief Engineer in Sind, for the compilation of the completion report of the Lloyd Barrage and Canals Construction Project, and the establishment appointed under him for that purpose, were further continued up to 30th April 1934.

17. Mr. E. C. Henriques, F.R.I.B.A., Chartered Architect, was appointed as part-time Architectural Adviser to Government for six months in the first instance with effect from 23rd October 1933.

18. The designation of the "Joint Mechanical and Agricultural Engineer in Sind" was changed to "Mechanical Engineer (Irrigation and Agriculture) in Sind".

19. The Draglines Division in Sind was named "Mechanical Division" with effect from 1st April 1933.

Matheran Water Works.
Preparation of the Kalyan Water Supply Scheme.
Ambernath Water Supply.

20. The Thana Sanitary and Salsette Water Supply Sub-division, with the exception of the marginally noted works which remained in the Poona Water Works Division was transferred to Thana Division in the Northern Circle.

21. The following three water supply works were transferred from Thana Division to Ratnagiri Division :—

(1) Nagothana Water Supply.
(2) Roha-Asthami Water Supply.
(3) Mahad Water Supply.

IV—DETAILED REVIEW.

A—Civil Buildings.

During the year under review the Roads and Buildings Branch of the Public Works Department of the Presidency executed works involving a total expenditure of Rs. 98,68,889. Important details of expenditure under the various heads are given below :—

Central Services.

						Rs.
Customs—						
On works	..	..	..	..		1,259
On repairs	..	..	..	..		44,671
				Total	..	45,930
Salt—						
On works	..	..	..	..		7,328
On repairs	..	..	..	..		1,00,552
				Total	..	1,07,880
Ecclesiastical—						
On works	..	..	..	..		4,058
On repairs	..	..	..	..		32,857
				Total	..	36,915
Political—						
On works	..	..	..	..		2,109
On repairs	..	..	..	..		616
				Total	..	2,725
Scientific Department—Meteorological—						
On works	..	..	..	..		309
On repairs	..	..	..	..		4,636
				Total	..	4,945

Public Health—

Under this head an expenditure of Rs. 587 was incurred on repairs.

Mint—						Rs.
On works	..	..	..	..		1,000
On repairs	..	..	..	..		6,399
				Total	..	7,399

Currency—		Rs.
On works	.. ..	67
On repairs	.. ..	10,934
	Total ..	11,001

Miscellaneous Departments—

Under this head, an expenditure of Rs. 54 was incurred on repairs.

Miscellaneous—

Under this head an expenditure of Rs. 11,291 was incurred on repairs.

*Post Offices**—		Rs.
On works	.. ..	55,869
On repairs	.. ..	78,119
	Total ..	1,33,988

The works of constructing a R. C. C. flooring in the basement floor of Irwin House, Ballard Estate, Bombay, and constructing a Post Office and Post Master's quarters at Andheri, were completed during the year, under report. The work of constructing a Post Office at Bellasis Road, Byculla, was in progress.

Telegraphs—		Rs.
On works	.. ..	5,083
On repairs	.. ..	20,937
	Total ..	26,020

Archæological†—

Under this head an expenditure of Rs. 24,366 was incurred on repairs.

Military Works—

Under this head an expenditure of Rs. 9,359 was incurred on repairs.

Provincial Services.

Land Revenue—		Rs.
On works	.. ..	2,011
On repairs	.. ..	4,487
	Total ..	6,498
Excise—		
On works	.. ..	10,808
On repairs	.. ..	22,844
	Total ..	33,652

* From the year 1921-22 the expenditure on Post and Telegraph Buildings has been transferred to the Accountant General, Posts and Telegraphs.

† From the year 1921-22 the expenditure on Archæological works has been transferred to the Accountant General, Central Revenues.

Forests—		Rs
On works	..	1,994
On repairs	..	7,080
Total	..	9,074
Registration—		
On works	..	236
On repairs	..	205
Total	..	441
General Administration—		
(1) Residences for Heads of Provinces—		
On works	..	24,926
On repairs	..	2,11,641
Total	..	2,36,567
(2) Provincial Legislative Councils—		
On works	..	79
On repairs	..	11,775
Total	..	11,854

(3) Residences—Under this head an expenditure of Rs. 913 was incurred on repairs.

(4) Secretariat and Headquarters Establishment—		Rs.
On works	..	3,124
On repairs	..	9,537
Total	..	12,661
(5) Commissioners and District Officers—		
On works	..	46,117
On repairs	..	1,96,260
Total	..	2,42,377
Administration of Justice—		
On works	..	28,921
On repairs	..	68,907
Total	..	97,828

The work of extension of the Pleaders' Chambers in the compound of the Judicial Courts at Ahmedabad was completed during the year under report.

Miscellaneous—		Rs.
On works	..	2,860
On repairs	..	16,199
Total	..	19,059

Jails and Convict Settlements—		Rs.
On works	..	21,034
On repairs	..	43,574
Total	..	64,608
Police—		
On works	..	98,430
On repairs	..	2,93,401
Total	..	3,91,831

The work of constructing 120 quarters for the Headquarters Police at Surat was completed during the year under report.

Education—University—		Rs.
On works	..	5,008
On repairs	..	40,480
Total	..	45,488
Secondary—		
On works	..	3,586
On repairs	..	21,701
Total	..	25,287
Primary—		
On works	..	113
On repairs	..	1,687
Total	..	1,800
Special—		
On works	..	2,224
On repairs	..	11,681
Total	..	13,905
Miscellaneous—		
On works	..	1,196
On repairs	..	24,068
Total	..	25,264
Medical—		
On works	..	25,303
On repairs	..	1,41,024
Total	..	1,66,327

		Rs.
Miscellaneous—		
On works	..	6,351
On repairs	..	36,719
Total	..	43,070
Agriculture—		
On works	..	15,083
On repairs	..	18,217
Total	..	33,300
Stationery and Printing—		
On works	..	206
On repairs	..	7,056
Total	..	7,262
Civil Works—		
On works	..	15,805
On repairs	..	1,94,204
Total	..	2,10,009
Public Health—		
On works	..	7,651
On repairs	..	23,461
Total	..	31,112
Miscellaneous Departments—		
On works	..	546
On repairs	..	7,952
Total	..	8,498

Government Central Stores, Workshop and Training Centre, Dapuri.

During the year under report, the total out-turn including a closing balance was Rs. 94,363 as compared with Rs. 1,63,595 in the previous year, representing the total value of the work produced at the Workshop. The outturn has decreased on account of the general slackness of business all round. The work done was of a varied nature and included repairs to road rollers, portable engines, two engines of the Uran Water Works and Sulzar engines at the Bahiroba Pumping Station. The articles manufactured at the Workshop included, amongst others, 12″ penstock gate, cast iron gates, castings for 15″ Hume pipe and Lacey-Dapuri type velocity rods, Circular gauges, Sloping gauges, Electrodes, Hook gauges

and Model Silt Abrader for the Irrigation Divisions. The work of manufacture of "Everite" specials and joints for a Bombay Firm was continued throughout the year and the turn-out amounted to 51 tons.

During the year under report 33 apprentices were under training, five apprentices completed their training. The training of apprentices is most encouraging and they generally develop into first class workmen after their five years period.

B—Electrical.

(1) *Electric Licenses.*

Electric supply continued to attract the attention of the public in an increasing degree. Nine new licenses, and one sanction under section 28 of the Indian Electricity Act, were granted during the year under report (1933–34) for the supply of electricity to Kapadwanj, Barsi, Bhusawal, Sangamner, Viramgam, Satara, Malegaon, Karad, Khopoli and Matheran, while several more applications were under the consideration of Government. By the end of the year under review, electricity had been installed in 36 centres in the Presidency and 13 others were in the process of electrification. The number of licenses, excluding those revoked, but including sanctions under section 28 of the Indian Electricity Act, actually in operation at the beginning of the year under report was 47 while at the end of the year the number operating was 54.

(2) *Electricity Duty.*

The electricity duty imposed by the Bombay Finance Act of 1932 was in the first instance extended for one year and was subsequently extended for a further period of one year, viz. 1934–35. The receipts from the tax amounted to Rs. 9,39,884 during 1933–34 as compared with Rs. 8,42,000 for the preceding year. They are credited to the head "XXXV-Miscellaneous (Provincial)" from the year 1933–34.

(3) *Electric Works.*

Under this head the expenditure incurred was as follows :—

	Rs.
On works	45,625
On repairs	1,84,000
Total ..	2,29,625

The most important original work undertaken during the year under review was the electrification of Government Buildings at Larkana estimated to cost Rs. 35,804. This was given out on contract and completed in all respects at a total expenditure of Rs. 29,022. One hundred and fifty-two other original works were also carried out at an aggregate cost of Rs. 15,082. One hundred special repair works were carried out during the year, of which the change over of the entire electric

installation at Government House, Ganeshkhind, to the Poona Electric Supply Company's mains was the most important, the expenditure thereon during the year being Rs. 23,576. The expenditure on ordinary repairs amounted to Rs. 1,29,265.

C—Communications.

Under this head the expenditure incurred was as follows :—

	Rs.
On works	12,87,851
On repairs	28,33,211
Total ..	41,21,062

The principal works completed or nearly completed during the year were :—

Providing 2″ asphalt macadam in mile 6/4 to 9/7 of the Bandra-Ghodbunder Road. Construction of a diversion of the Bombay-Agra Road outside Thana Town.	Thana Division.
Improving the Khanapur-Yellapur Road ..	Kanara Division.
Constructing a masonry bridge across the Gad river near Kankavli on Malwan-Phonda Road. Constructing a masonry bridge across the Janoli river near Kankavli on Malwan-Phonda Road.	Ratnagiri Division.
Improvements to and diversion of the Kennedy Road, Poona.	Poona Division.
Brick paving the Jacobabad-Shikarpur Road from Kot Sultan to Shikarpur—miles 18 to 26.	Shikarpur Canals Division.

The principal works in progress during the year were :—

Constructing a bridge over the Balganga river and diversion in mile 4/7 of Pen-Panvel Section of Bombay-Konkan-Goa Road. Constructing a section from Talasari to Vapi of the Bombay-Ahmedabad-Rajputana Road.	Thana Division.
Constructing a link road from Damanganga to Vapi (2 miles) on Talasari to Vapi Section. Diversion round Pardi on Vapi-Bulsar Section. Improving miles 4 to 9/6 of Matwad-Navsari Section.	Surat and Broach Division.

Metalling and improving the road from Viramgam to Mandal.	Ahmedabad Division.
Asphalting roads in and around Belgaum ..	Belgaum Division.
Asphalting miles Nos. 261 to 263 of the Poona-Bangalore Road. Asphalting miles 267 to 270 of the Poona-Bangalore Road.	Dharwar Division.
Improving the Karwar-Bellary Road. Improving the Kumta-Hubli Road.	Kanara Division.
Constructing masonry drains over 146 nalas on Dharamtar-Mahableshwar Road.	Ratnagiri Division.
Constructing Warsa-Borzar Road, Section I. Constructing Dhadgaon-Shahada Road, Section IV. Improvements to Taloda-Shahada Road, Sections I and II.	Khandesh Division.
Improvements to Karachi-Kotri Road ..	Karachi Buildings and Karachi Canals Divisions.

The following works were financed from the Petrol Tax Fund and the expenditure incurred on them during the year was as shown below :—

Constructing Talasari-Vapi Section (Wanting links miles 16½)—Rs. 35,128. Improving Manor-Varoti Section—Rs. 13,414. Diversion of Bombay-Agra Road round Thana Town—Rs. 34,383. Bridge over the Balganga river and diversion in mile 4/7 of Panvel-Pen Section—Rs. 5,894. Providing 2″ asphalt macadam, full grout, to miles 6 to 10 of Bandra-Ghodbunder Road, etc.—Rs. 15,998.	Thana Division.
Constructing link road from Damanganga to Vapi (2 miles) on Talasari-Vapi Section—Rs. 11,907. Improving Sabargam-Surat Section—Rs. 6,495 Improving miles 4 to 9/6 of Matwad-Navsari Section—Rs. 43,771. Diversion round Pardi on Vapi-Bulsar Section—Rs. 16,992. Constructing bridges, etc., on 12 miles on Surat-Sahol Section—Rs. 2,054.	Surat and Broach Divisions.
Metalling and improving Viramgam-Mandal Section—Rs 67,896.	Ahmedabad Division.
Construction of a new bridge to replace the existing dangerous bridge in mile 136 of Nasik-Malegaon Section—R . 3,012.	Nasik Division.

Construction of a new bridge to replace the existing dangerous bridge over the Mosam river at Malegaon—Rs. 13,214.	
Making improvements to low-lying miles 75 to 84 on Poona side of Khandala—Rs. 70,622.	Poona Division.
Resurfacing with asphalt the approach to Poona, 5 miles on each side on Bombay-Poona Section—Rs. 895.	
Providing treble wheel track creteway on Poona-Ahmednagar Road from mile 2/1 to 2/5—Rs. 670.	
Asphalting the road between Hubli and Bhairidevarkoppa—Rs. 10,601.	Dharwar Division.
Asphalting miles Nos. 261 to 263 of Poona-Bangalore Road—Rs. 27,947.	
Asphalting miles Nos. 267 to 270 of Poona-Bangalore Road—Rs. 24,977.	
Causeway over Benni nalla between Navalgund and Nargund—Rs. 24,949.	
Improvements to Kumta-Hubli Road—Rs. 25,731.	Dharwar and Kanara Divisions.
Bridge between Bhusawal and Warangaon on Bhusawal-Edlabad Section—Rs. 554.	Khandesh Division.
Crossing over the Purna river (trial surveys)—Rs. 753.	
Crossing over the Girna river at Mehunbara (trial surveys)—Rs. 364.	
Surveying the nulla crossing on the proposed Bhusawal-Nimber-Frontier Road Section, etc.—Rs. 26.	
Asphalting certain roads near and about Belgaum—Rs. 40,055.	Belgaum Division.
Improving Karwar-Bellary Road (miles 1 to 75)—Rs. 39,993.	Kanara Division.
Reconstruction by asphalting mile No. 104 of Karwar-Bellary Road—Rs. 26,994.	
Masonry drains with reinforced cement concrete slabs over 146 nallas on Vadkal-Mahad and Mahad-Poladpur Sections—Rs. 75,371.	Ratnagiri Division.
Bridge over the Gad river near Kankavli—Rs. 60,968.	
Bridge over the Janaoli river on Malwan-Phonda Section—Rs. 57,833.	
Bridge over the Kasal river on Malwan-Phonda Section—Rs. 42,685.	
Raising certain lengths of road in Section I from Dharamtar to Dasgaon—Rs. 6,209.	

Constructing 2 small bridges between Asurda and Savarda nallas in Section III of Hatkhamba-Poladpur Road—Rs. 16.	Ratnagiri Division.
Improvements to the section from Hyderabad to Hala—Rs. 30,561.	Hala and Karachi Buildings Divisions.
Improvements to the section from Sakrand to Moro—Rs. 17,332.	Dad Division.
Reconstructing Karachi-Kotri Road—Rs. 2,12,450.	Karachi Buildings and Karachi Canals Divisions.
Brick paving Shikarpur-Kot Sultan Section—Rs. 78,002.	Begari Canals Division.

Repairs to communication works to the extent of Rs. 27,797 were executed out of the Petrol Tax Fund.

Arboriculture.

Nurseries were maintained at various places and the planting, watering and protection of road side trees continued to receive attention as usual. About 9,443 trees were planted during the year along the Provincial and Local Fund roads in charge of this Department.

D—Miscellaneous.

Under this head the expenditure incurred was as follows :—

	Rs.
On works	1,72,910
On repairs	2,40,075
Total ..	4,12,985

Public Health, Water Supply, Drainage and Boring Works.

During the year under report designs, specifications and preliminary estimates were prepared for the installation of plant for the Hospital for Mental Diseases, Yeravda, Junnar Water Supply and the Bijapur Water Supply. Two Worthington-Simpson, Horizontal, standard, free-flow, centrifugal pumps for the Shikarpur Drainage, one eight-ton steam road roller for the Executive Engineer, Kanara Division, and two-hundred gallons capacity tar and asphalt boilers for the Executive Engineer, Belgaum Division, were ordered after calling for quotations from several firms in Bombay. The pumping machinery at the Uran, Pandharpur, Bijapur, Dharwar, Karad, Nasik, Jalgaon and Shingnapur Water Supplies was inspected during the year and advice given where necessary. Forty-seven road rollers and two portable engines were inspected during the year under report.

The two new Bellis Morcom High Speed Vertical Compound Condensing Steam Engines with directly coupled Worthington Centrifugal pumps 18" diameter for lifting water from the Mutha Right Bank Canal, capable of discharging 275,000 gallons per hour against a total head of 40 feet, were erected complete and the expenditure incurred thereon during the year was Rs. 11,963. A new electric Motor and pump of capacity 420,000 gallons per hour was installed at the Bahiroba Pumping Station and the expenditure incurred thereon was Rs. 19,684. The work of Remodelling the Mutha Right Bank Canal continued in progress during the year, the expenditure incurred thereon being Rs. 6,381. The work of constructing extra surface drains at Gadag-Bettigeri, which forms a part of the Gadag-Bettigeri Drainage work, was completed during the year under report, the expenditure during the year being Rs. 11,966. An expenditure of Rs. 4,986 was incurred during the year in connection with the Water Supply Scheme at Khed which had been entrusted to the Public Works Department by the Khed Municipality. Surveys in connection with the works of Transfuleli Quarters, Surface Drainage (Hyderabad, Sind), Jacobabad Drainage and Karachi Water Supply were carried out during the year.

The following important works were maintained during the year :—

(1) Poona Water Works.

(2) Kirkee Water Works, including Pashan and Holkar's Bridge Water Works.

(3) Bahiroba Pumping Station at Poona.

(4) Poona Drainage Improvement Scheme, Section I.

(5) Poona Drainage Improvement Scheme, Section II.

(6) Alandi Water Supply.

(7) Matheran Water Supply.

(8) Water Works at Karad, Satara Camp and Pandharpur.

Realizations from the sale of boring tools, rents for hire of plant, etc., during the year amounted to Rs. 1,980. During the year under report Government sanctioned an allotment of Rs. 600 to meet the cost of training apprentices and fitters in shallow boring and accordingly two bore holes were made at Dapuri and four boys and three fitters have been so trained.

E—Technical Papers.

The following Public Works Department Technical papers were issued during the year :—

No. 44.—The Dissipation of energy below falls, by C. C. Inglis, B.A., B.A.I., M.Inst.C.E., Superintending Engineer, Irrigation Development and Research Circle, and D. V. Joglekar, B.E., Assistant Engineer.

No. 45.—Note of May 1931 on Silt Exclusion from Canals, "Still Pond" versus "Open Flow," Part I, by C. C. Inglis, B.A., B.A.I., M.Inst.C.E., I.S.E., Superintending Engineer, Irrigation Development and Research Circle.

No. 46.—Note on Silt Exclusion from Canals, Part II—First report on experimen s with the full width model of the Sukkur Barrage at Khadakvasla with Appendices on the design of dynamically similar models in accordance with Lacey's formulas, by C. C. Inglis, B.A., B.A.I., M.Inst.C.E., I.S.E., Superintending Engineer, Irrigation Development and Research Circle, and D. V. Joglekar, B.E., Assistant Engineer.

No. 47.—Report on experiments carried out on Models of Standard Vertical Screw Gates adopted in the Lloyd Barrage and Canals Scheme, by C. G. Hawes, M.C., B.Sc. (Lond.), A.C.G.I., M.Inst.C.E., I.S.E., Executive Engineer, Development and Research Division.

No. 48.—Report on reclamation and drainage of alkali lands in Hungary, by C. G. Hawes, M.C., B.Sc. (Lond.), A.C.G.I., M.Inst.C.E., I.S.E., Executive Engineer, Development and Research Division.

F—Railways.

The Railway lines within the Bombay Presidency are not administered by this Government but are under the direct control of the Railway Board which also exercises control over the railways in British India and the Indian States.

2. The continued economic and trade depression prevailing in the country is again reflected in the Railway Budget for 1934–35. The total deficit for the year 1934–35 is estimated at 5¼ crores compared with 7¾ crores which was the anticipated deficit for the year 1933–34. The improvement is due partly to the fall in interest charges and partly to an increase anticipated in the receipts from goods traffic during 1934–35.

3. No new lines have been opened for traffic during the year 1933–34. The existing line between Ghorpuri and Poona on the Madras and Southern Mahratta Railway was altered from single to double line and was opened for working on 2nd March 1934.

4. Surveys on the following lines were completed or were in progress :—

(1) Pandharpur-Lonand Survey.

(2) Jhudo-Pithoro Survey.

(3) Bombay-Sind Connection Traffic Survey 286 miles.

5. The Indian States within the Bombay Presidency have, with effect from 1st April 1933, been brought into direct political relations with the Government of India, and the control so far exercised by this Government over these states has been withdrawn with effect from that date.

6. The total length of the Railways in the Presidency (including Sind but excluding Indian States) open for traffic during the year under review was 3,561·581 miles made up as shown below :—

	Broad gauge.	Meter gauge.	Narrow gauge.	Total.
Bombay Baroda and Central India Railway	541·254	119·888	144·069	805·211
Great Indian Peninsula Railway.	822·321	....	62·064	884·385
Madras and Southern Mahratta Railway	....	587·875	....	587·875
North Western Railway ..	817·52	....	129·68	947·20
Jodhpur Railway ..	....	223·91	....	223·91
Barsi Light Railway ..	....	....	113·000	113·000
	2,181·095	931·673	448·813	3,561·581

G—Development Schemes.

Back Bay Reclamation Scheme.

The total expenditure incurred on the Back Bay Reclamation Scheme during the year 1933–34 amounted to Rs. 59,394. The following works were carried out during that period.

(1) Approximately 547,800 cubits feet of suitable building debris, which was obtained free of cost, was conveyed and deposited in Block No. 7 at a total cost of Rs. 3,491. The work of providing "Katcha" roads, stone kerbing, and lighting in Block No. 1 was completed in 1933–34 at a total cost of Rs. 16,061. Gas mains were laid and 24 gas lamps were provided along certain roads in Blocks Nos. 1 and 2 at a cost of Rs. 5,227. The work of planting trees along the Marina and Churchgate Street extension continued in progress.

(2) *Sanitation and anti-malarial measures.*—The responsibility for sanitary and anti-malarial measures in Blocks Nos. 1, 2 and 7 of the Back Bay Reclamation Scheme was transferred to the Bombay Municipality with effect from the 1st December 1933 in consideration of an annual payment of Rs. 4,775 by Government.

(3) *Repairs and maintenance.*—The expenditure incurred during the year 1933–34 on repairs and maintenance in connection with the scheme amounted to Rs. 45,436. The costs of important items included in this sum were :—

	Rs.
(1) New sea wall and rubble mound	9,840
(2) "Katcha" roads in Blocks Nos. 1 and 2 and surface drainage	6,976
(3) Surplus plant	2,294

(4) *Disposal of surplus stores, plant, etc.*—Some rolling stock and other miscellaneous articles of surplus plant and stores were disposed of during the year. The total realisations amounted to Rs. 26,489.

(5) A list of the members of the S. A. C. for the Back Bay Reclamation Scheme will be found in Appendix VI.

II. Suburban Scheme—

(1) During the year 1933-34 a 20′ road at Chembur was constructed at a cost of Rs. 1,649.

(2) *Water Supply Schemes.*—Extensions of pipe lines for supply of water along certain roads in Suburban Scheme No. 16—Shahar (Andheri Sector), Willingdon South at Santa Cruz, and in the Ambernath and Badlapur areas were laid during the year. The expenditure in connection with new works in the Salsette and Ambernath water supply schemes amounted to Rs. 19,064. The total expenditure and receipts on the water supply schemes amounted to—

	Expenditure.	Receipts.
	Rs.	Rs.
Salsette Water Supply Scheme ..	3,33,580	4,53,358*
Ambernath Water Supply Scheme ..	25,662	28,688

*Exclusive of refunds amounted to Rs. 382.

(3) *Ambernath Electric Supply Scheme.*—The expenditure and receipts on the scheme amounted to Rs. 13,205 and Rs. 18,353, respectively.

Note.—In the concluding sentence of paragraph 1 (*1*) under " H-Development Schemes " appearing on page 22 of the Administration Report for the year 1932-33 *for* the figures " Rs. 37,018 " *substitute* the figures " Rs. 644 ".

APPENDIX I.

Statement showing the expenditure on Civil and Military Works during the year 1933–34.

Service Head	Original Works		Repairs		Total	
	Grant	Outlay	Grant	Outlay	Grant	Outlay
1	2	3	4	5	6	7
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
50—*Military Works.*						
Works	..	..	9,406	9,359	9,406	9,359
Establishment—Non-voted ..	..	..	2,352	856	2,352	856
Establishment—Voted	..	..	..	2,954	....	2,954
Tools and Plant ..	..	..	281	202	281	202
Total, Military Works.	..	..	12,039	13,371	12,039	13,371
41—*Civil Works—Central.*						
Buildings—Non-voted	4,004	3,852	29,600	28,716	33,604	32,568
Buildings—Voted ..	13,292	12,278	1,75,550	1,72,591	1,88,842	1,84,869
Miscellaneous—Voted.	..	..	11,250	11,291	11,250	11,291
Establishment—Voted	..	..	..	..	48,456	58,449
Establishment—Non-voted	..	..	..	..	8,233	19,813
Tools and Plant—Voted	..	..	..	..	6,082	3,607
Tools and Plant—Non-voted ..	..	..	..	..	1,080	....
Grant-in-aid—Non-voted	..	..	..	..	2,600	2,553
Deduct—English cost of stores and establishment ..	..	..	..	..	....	....
Loss or Gain by Exchange ..	..	..	..	..	....	....
Expenditure ..	..	..	..	..	....	....
Total, 41—Civil Works—Central ..	17,296	16,130	2,16,400	2,12,598	3,00,147	3,13,150
41—*Civil Works—Provincial.*						
Buildings—Reserved .	25,000	24,926	2,16,000	2,11,641	2,41,000	2,36,567
Buildings—Transferred ..	3,34,988	2,98,686	40,93,191	12,03,432	57,31,599	15,02,118
Communications ..	1,46,234	12,87,851		28,33,211		41,21,062
Miscellaneous ..	11,54,288	2,653		27,171		29,824
Carried over ..						

Service Head	Original Works		Repairs		Total	
	Grant	Outlay	Grant	Outlay	Grant	Outlay
1	2	3	4	5	6	7
Brought over ..	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
41—*Civil Works—Provincial*—contd.						
Establishment—Reserved—Non-voted ..	..	..	..	..	....	31,208
Voted	..	..	..	..	....	74,329
Establishment—Transferred—Non-voted ..	..	..	..	..	16,75,106	5,68,990
Voted	..	..	..	..	51,33,851	15,99,418
Tools and Plant—Reserved ..	..	..	..	..	....	6,486
Tools and Plant—Transferred ..	..	..	..	..	2,69,735	1,57,052
Grant-in-aid ..	..	..	..	..	8,41,842	8,68,425
Suspense ..	..	..	..	..	14,984	46,161
Deduct—English Cost of Stores and Establishment—Stores—Transferred.	..	..	..	..	—4,840	—4,808
Establishment—Transferred—Non-voted ..	..	..	..	..	—4,13,800	—3,13,343
Voted	..	..	..	..	—7,400	—7,430
Loss or Gain by exchange—Stores ..	..	..	..	..	....	1
Loss or Gain by Establishment—Non-voted .	..	..	..	..	....	—398
Loss or Gain by Establishment—Voted ..	..	..	..	..	....	—11
Expenditure in England—Stores ..	..	..	..	..	4,840	4,807
Establishment—Non-voted	..	..	..	..	4,13,800	3,13,741
Establishment—Voted.	..	..	..	..	7,400	7,441
Total, 41—Civil Works—Provincial.	16,63,408	16,14,116	43,09,191	42,75,455	1,39,08,117	92,41,640
60—*Civil Works.*						
Buildings ..	44,708	43,582	..	..	44,708	43,582
Communications ..	52,578	51,711	..	..	52,578	51,711
Miscellaneous—	..	..	..	..	....	....
Establishment—Non-voted ..	..	..	..	..	....	7,099
Establishment—Voted	..	..	..	..	254	24,708
Tools and Plant ..	..	..	..	..	....	1,615
Total, 60—Civil Works.	97,286	95,293	..	..	97,540	1,28,715
District Local Fund ..	..	..	..	..	....	6,330
Deposit Contributions ..	..	..	..	..	....	1,65,683
Grand Total ..	17,77,990	17,25,539	45,37,630	45,01,424	1,43,17,843	98,68,889

APPENDIX II.

APPENDIX

Statement of Roads not within Municipal boundaries, giving lengths of metalled during the

Name of Circle.	Name of Division.	Length of metalled roads maintained by the Public Works Department.	Length of unmetalled roads maintained by the Public Works Department.	Length of metalled roads maintained by the Local Authorities.
1	2	3	4	5
		Miles.	Miles.	Miles.
Presidency Proper.				
Northern Circle ..	Thana	(*a*) 449·35	8·12	(*b*) 371·51
	Surat	(*d*) 181·90	(*e*) 9·43	(*f*) 135·16
	Broach	53·98	....	34·84
	Kaira	180·70	9·13	(*i*) 60·13
	Panch Mahals ..	156·28	17·50	(*k*) 28·36
	Ahmedabad ..	(*m*) 142·47	(*n*) 52·96	(*o*) 58·60
	Total, Northern Circle ..	1,164·68	97·14	688·60

Note.—The lengths of Provincial roads included in columns 3 and 4 of the above state-in the Bombay Presidency are not now required to contribute towards the maintenance "Remarks" column.

(*a*) The increase in column 3 is due to some additional lengths of Bombay-Agra Road, having been constructed during the year.

(*b*) and (*c*) The increase in the metalled and unmetalled lengths in columns 5 and 6 is District and Kolaba District during the year.

(*d*) and (*e*) The increase in the metalled length in column 3 and the corresponding Matwad-Navsari road having been metalled during the year.

(*f*) The increase in the metalled length in column 5 is due to certain unmetalled lengths the year.

(*g*) The increase in the unmetalled length in column 6 is due to certain new lengths of Surat, during the year.

(*h*) The increase in the unmetalled length in column 6 is due to certain additional Board, Broach, during the year.

(*i*) and (*j*) The increase in the metalled length in column 5 and the corresponding roads having been metalled by the District Local Board, Kaira, during the year.

(*k*) and (*l*) The increase in the metalled length in column 5 and the decrease in the been converted into metalled by the District Local Board, Panch Mahals, during the

(*m*) The decrease in the metalled length in column 3 is due mainly to the transfer of during the year and partly to certain unmetalled length of a road included erroneously in unmetalled length.

(*n*) The decrease in the unmetalled length in column 4 is due to certain unmetalled

(*o*) The increase in the metalled length in column 5 is due to certain unmetalled length the year.

(*p*) The increase in the unmetalled length in column 6 is due to certain lengths of roads

II.

and unmetalled roads maintained by the Public Works and Local Authorities year 1933-34.

Length of unmetalled roads maintained by the Local Authorities.	Total length of metalled roads.	Total length of unmetalled roads.	Remarks.	
			Metalled roads maintained by the Public Works Department in Municipal limits.	Unmetalled roads maintained by the Public Works Department in Municipal limits.
6	7	8	9	10
Miles.	Miles.	Miles.	Miles.	Miles.
(*c*) 74·43	820·86	82·55	23·04	....
(*g*) 301·66	317·06	311·09	....	....
(*h*) 178·80	88·82	178·80	1·36	....
(*j*) 11·97	240·83	21·10	10·61	....
(*l*) 20·01	184·64	37·51	1·37	....
(*p*) 300·46	201·07	353·42	....	....
887·33	1,853·28	984·47	36·38	....

ment are exclusive of portions passing through the Municipal limits. The Municipalities of Provincial roads passing through their limits and the lengths of these are shown in the

Section II—Thana to Bhiwandi *via* Kasheli Bridge and S. S. III—Chembur Road due to construction of certain new roads by the District Local Boards, Bombay Suburban decrease in the unmetalled length in column 4 is due to certain unmetalled length of of roads having been converted into metalled by the District Local Board, Surat, during unmetalled roads having been taken up for maintenance by the District Local Board, length of unmetalled roads having been taken up for maintenance by the District Local decrease in the unmetalled length in column 6 is due to certain unmetalled lengths of

unmetalled length in column 6 are due to certain unmetalled lengths of roads having year.

Sadra-Dabhoda Road to the Executive Engineer, Western India States Agency, Rajkot, the metalled length previously having been omitted therefrom and added to the

lengths having been metalled during the year.

having been converted into metalled by the District Local Board, Ahmedabad, during

having been newly vested in Taluka District Local Board, Sanand, during the year.

APPENDIX

Name of Circle.	Name of Division.	Length of metalled roads maintained by the Public Works Department.	Length of unmetalled roads maintained by the Public Works Department.	Length of metalled roads maintained by the Local Authorities.
1	2	3	4	5
Presidency Proper —contd.		Miles.	Miles.	Miles
Central Circle ..	Poona	(*a*) 472·24	(*b*) 14·62	(*c*) 320·77
	Sholapur	471·43	95·82	(*f*) 346·53
	Nasik	476·51	9·20	(*h*) 168·62
	Khandesh	(*j*) 667·37	(*k*) 16·31	(*l*) 300·96
	Total, Central Circle ..	2,087·55	135·95	1,136·88
Southern Circle ..	Belgaum	(*p*) 616·15	95·85	(*q*) 293·86
	Dharwar	549·75	99·06	(*q*) 582·11
	Ratnagiri	(*s*) 474·49	....	(*q*) 385·65
	Kanara	385·80	194·08	(*q*) 127·70
.. ..	Total, Southern Circle ..	2,026·19	388·99	1,389·32

(*a*) The increase in column 3 is due to length of 14 miles, 1,765 feet of Wadgaon-Chakan to certain corrections reported during the year.
(*b*) The increase in column 4 is due to unmetalled length of Karad-Tasgaon Road
(*c*) The decrease in column 5 is due to certain lengths of roads being metalled during
(*d*) The increase in column 6 is due to certain lengths of unmetalled roads having been
(*e*) The decrease in column 9 is due to omission of length of 1 mile, 4,380 feet of length of 1,428 feet of road in Town Planning Scheme being taken over for maintenance
(*f*) The increase in column 5 is due to the conversion of 2½ miles of unmetalled roads
(*g*) The increase in column 6 is due to addition of 8 miles approaches taken up by the road being metalled.
(*h*) The decrease in column 5 is due to the transfer of 11 miles, 7 furlongs, 335 feet of roads newly metalled.
(*i*) The increase in column 6 is due to 140 miles, 2 furlongs, 25 additional roads being being metalled during the year.
(*j*) The increase in column 3 is due to addition of 4 miles and 3,960 feet of portion of
(*k*) The increase in column 4 is due to transfer of length of 1,220 feet of Taloda-Shahada
(*l*) The increase of 3,960 feet is due to that length out of the unmetalled portion of
(*m*) The increase is due to new construction and the inclusion of certain " Earth " before.
(*n*) The increase of 3,460 feet is due to Taloda-Shahada Road in Shahada Municipal
(*o*) The increase of 2,310 feet is due to Taloda-Shahada Road in Shahada Municipal
(*p*) The decrease in column 3 is due to transfer of certain lengths of Poona-Bangalore ment authorities and to certain corrections reported during the year.
(*q*) The lengths of metalled and unmetalled roads maintained by local authorities
(*r*) The increase is due to corrections reported during the year.
(*s*) The increase in column 3 is due to the additional length consequent on the Road and to certain corrections reported during the year.
(*t*) A length of 3 miles 1,478 feet which was shown erroneously as outside Municipal
(*u*) The decrease is due to transfer of the length of Provincial road through Municipal

II—*contd.*

Length of unmetalled roads maintained by the Local Authorities.	Total length of metalled roads.	Total length of unmetalled roads.	Remarks.	
			Metalled roads maintained by the Public Works Department in Municipal limits.	Unmetalled roads maintained by the Public Works Department in Municipal limits.
6	7	8	9	10
Miles.	Miles.	Miles.	Miles.	Miles.
(*d*) 2,213·80	793·01	2,228·42	(*e*) 52·43	....
(*g*) 928·48	817·96	1,024·30	24·24	....
(*i*) 1,410·58	645·13	1,419·78	14·78	·30
(*m*) 642·04	968·33	658·35	(*n*) 30·35	(*o*)1·18
5,194·90	3,224·43	5,330·85	121·80	1·48
(*q*) 423·05	910·01	518·90	(*r*) 21·50	....
(*q*) 339·89	1,131·86	438·95	19·95	4·49
(*q*) 888·10	860·14	888·10	(*t*) 17·28	....
(*q*) 498·70	513·50	692·78	(*u*) 19·49	3·83
2,149·74	3,415·51	2,538·73	78·22	8·32

Road having been taken over from the District Local Board, Poona, for maintenance and being taken as 12 miles instead of 11 miles, 2,640 feet.
the year.
taken over for maintenance during the year.
Hadapsar-Saswad Road and extension of Poona City Municipal limit (2,805 feet) and a during the year.
into metalled roads.
District Local Board, Satara, for maintenance during the year less 2½ miles of unmetalled roads to the Forest Department and the addition of 2 furlongs, 200 feet of unmetalled maintained by the District Local Board less 2 furlongs and 200 feet unmetalled road
Warsa Borzar Road being metalled and to certain corrections in lengths of roads.
Road to unmetalled portion and to certain corrections reported.
Gorand-Sindkheda Road being metalled during the year.
roads by the District Local Board, East Khandesh, which were not taken into account
limits being now shown as such.
limits being now shown as such.
Road, Link and Magazine Road and Belgaum-Linganmath Road to the Belgaum Canton-shown are as now reported by the Local bodies concerned.
diversion of the road at the time of constructing bridges on the Hatkhamba-Poladpur
limits has now been correctly included in the lengths within Municipal limits.
limits to the Kumpta Municipality.

APPENDIX

Name of Circle.	Name of Division.	Length of metalled roads maintained by the Public Works Department.	Length of unmetalled roads maintained by the Public Works Department.	Length of metalled roads maintained by the Local Authorities.
1	2	3	4	5
Presidency Proper—concld.		Miles.	Miles.	Miles.
Deccan Irrigation Circle.	Poona Irrigation ..	224·10	....	....
	Nira R. B. Canal ..	68·73	....	....
	Ahmednagar ..	298·77	57·57	(*b*) 457·53
	Nasik Irrigation ..	47·0	....	....
	Total—Deccan Irrigation Circle.	638·60	57·57	457·53
	Total for Presidency Proper.	5,917·02	679·65	3,672·33
Sind.				
Northern Sind Circle.	Shikarpur Canals ..	21·21	2·18	60·0
	North Western Canal ..	....	....	....
	Begari Canals ..	(*c*) 8·0	(*d*) 22·50	....
	Khirtar ..	....	(*e*)	....
	Total—Northern Sind Circle.	29·21	24·68	60·0
Southern Sind Circle.	Karachi Buildings ..	(*f*) 37·75	(*f*) 132·25	9·37
	Karachi Canals ..	18·50	(*h*) 54·61	2·0
	Fuleli Canals ..	3·50	56·44	4·62
	Nasir ..	....	(*j*) 14·75	5·5
	Hyderabad ..	3·12	15·25	5·12
	Total—Southern Sind Circle.	62·87	273·30	26·61

(*a*) The decrease is due to transfer of 6 furlongs 130 feet of road to Baramati Municipality.
(*b*) The increase in column 5 is due to 24 miles and 7 furlongs of unmetalled road having
(*c*) These 8 miles were metalled during the year.
(*d*) Of 30·5 miles shown last year 8 miles have been metalled and hence the reduction.
(*e*) The changes are due to correct figures having been reported during the year under
(*f*) The lengths of metalled and unmetalled roads shown herein are as now reported
(*g*) The difference in the length as compared with that of 1932–33 is due to the bound Road.
(*h*) The decrease of 7 furlongs and 50 feet is due to certain lengths of Sujawal and
(*i*) The difference is due to the revision of figures in view of the changes in Divisions
(*j*) The difference is due to transfer of 2 furlongs from the Southern Jamrao Division.

II—*contd.*

Length of unmetalled roads maintained by the Local Authorities.	Total length of metalled roads.	Total length of unmetalled roads.	Remarks.	
			Metalled roads maintained by the Public Works Department in Municipal limits.	Unmetalled roads maintained by the Public Works Department in Municipal limits.
6	7	8	9	10
Miles.	Miles.	Miles.	Miles.	Miles.
....	(*a*) 224·10	....	0·77	....
....	68·73	....	2·00	....
(*b*) 307·93	756·30	365·50	6·32	....
....	47·0	....	....	....
307·93	1,096·13	365·50	9·09	....
8,539·90	9,589·35	9,219·55	245·49	9·80
1,022·97	81·21	1,025·15	....	....
201·5	....	201·5	....	....
1,098·25	8·0	1,120·75	....	....
(*e*) 46·0	....	46·0	....	....
2,368·72	89·21	2,393·40	....	....
(*g*) 467·62	47·12	599·87	7·12	1·5
(*i*) 868·62	20·50	923·23	....	....
483·12	8·12	539·56	....	....
147·87	5·5	162·62	....	....
284·25	8·24	299·50	....	....
2,251·48	89·48	2,524·78	7·12	1·5

been metalled during the year. This also accounts for decrease in column 6.

report.
by Executive Engineer, K. B. Division.
aries in this Division having been revised owing to the transfer of the Karachi-Hyderabad

J. B. Roads having been eroded.
and Districts.

APPENDIX.

Name of Circle.	Name of Division.	Length of metalled roads maintained by the Public Works Department.	Length of unmetalled roads maintained by the Public Works Department.	Length of metalled roads maintained by the Local Authorities.
1	2	3	4	5
Sind—contd.		Miles.	Miles.	Miles.
Western Sind Circle.	Northern Dadu ..	....	7·62	....
	Rice Canals ..	7·81	9·00	1
	Warah ..	....	....	....
	Manchar Drainage ..	....	....	....
	Southern Dadu ..	(*a*) 5·0	....	3·06
	Total—Western Sind Circle.	12·81	16·62	(*b*) 4·06
Rohri Canal Circle.	Rohri ..	....	40·47	....
	Nasrat ..	1·93	1·96	2·56
	Dad ..	3·85	(*c*) 70·00	....
	Hala ..	6·50	66·20	4·80
	Total—Rohri Canal Circle.	12·28	178·63	7·36
Eastern Sind Circle.	Mithrao ..	....	13·0	(*g*) 4·5
	Khipro ..	....	35·0	(*h*) 2·0
	Northern Jamrao ..	....	....	14·5
	Southern Jamrao ..	....	(*h*) 15·12	(*h*) 15·0
	Total—Eastern Sind Circle.	....	63·12	36·0
	Total for Sind ..	117·17	556·35	134·03
	Grand Total ..	6,034·19	1,236·0	3,806·36

(*a*) Includes 4 miles muram surface.

(*b*) Increase of 1½ furlongs as compared with the previous year's statement is due to

(*c*) There is a difference of 220 miles as compared with the previous year's statement,

(*d*) The increase of 3 miles is due to correct mileage now reported by the District

(*e*) The decrease of 1 mile is due to correction reported by the Executive Engineer.

(*f*) The decrease of 5 miles 4,224 feet is due to correct mileage now reported by the

(*g*) The increase in length of metalled roads is due to 3 miles of unmetalled road having

(*h*) The differences in the lengths as compared with the previous year's statement are

II—*concld.*

Length of unmetalled roads maintained by the Local Authorities.	Total length of metalled roads.	Total length of unmetalled roads.	Remarks.	
			Metalled roads maintained by the Public Works Department in Municipal limits.	Unmetalled roads maintained by the Public Works Department in Municipal limits.
6	7	8	9	10
Miles.	Miles.	Miles.	Miles.	Miles.
176·0	....	183·62	....	....
467·62	8·81	476·62	....	....
225·5	....	225·50	....	....
205·0	....	205·0	....	....
661·0	8·06	661·0	....	....
(*c*) 1,735·12	16·87	1,751·74	....	....
(*d*) 338·5	....	378·97	....	....
315·43	4·49	317·39	....	....
312·0	3·85	382·00	....	....
(*f*) 354·3	11·30	420·50	....	....
1,320·23	19·64	1,498·86	....	....
1,032·00	4·5	1,045·0	....	....
(*h*) 1,438·50	2·0	1,473·50	....	....
(*h*) 232·25	14·5	232·25	....	....
(*h*) 252·00	15·0	267·12	....	....
2,954·75	36·0	3,017·87	....	....
10,630·30	251·20	11,186·65	7·12	1·5
19,170·20	9,840·55	20,406·20	252·61	11·3

extra metalling during the year.

which is due to correct mileage now reported by the District Local Board Authorities.

Local Board Authorities.

District Local Board Authorities.

been brick paved during the year.

due to correct lengths now reported by the Local Board Authorities.

APPENDIX

Statement showing the expenditure on Provincial Buildings and

	1921-22		1922-23		1923-24	
	41-C.W. Provincial.	60-C.W.	41-C.W. Provincial.	60-C.W.	41-C.W. Provincial.	60-C.W.
1	2	3	4	5	6	7
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
(i) Expenditure on buildings for original works in the Presidency proper ..	70,17,468	..	18,40,250	21,36,237	12,74,148	46,74,102
(ii) Do. Sind ..	12,90,750	..	2,77,527	7,11,895	1,70,426	5,52,140
	83,08,218		21,17,777	28,48,132	14,44,574	52,26,242
(iii) Expenditure on buildings for maintenance in the Presidency proper ..	11,03,937	..	13,79,087	..	15,99,041	..
(iv) Do. Sind ..	1,64,210	..	1,51,421	..	1,78,426	..
	12,68,147		15,30,508		17,77,467	
(v) Expenditure on metalled Provincial roads for original works in the Presidency proper	19,39,046	..	15,22,488	6,94,035	10,92,068	4,54,014
(vi) Do. Sind ..	42,695	..	98,466	..	73,471	..
	19,81,741		16,20,954	6,94,035	11,65,539	4,54,014
(vii) Expenditure on unmetalled Provincial roads for original works in the Presidency proper	5,00,155	..	97,110	20,903	72,046	20,943
(viii) Do. Sind ..	..	..	..	..	170	..
	5,00,155		97,110	20,903	72,216	20,943
(ix) Expenditure on metalled Provincial roads for maintenance in the Presidency proper ..	19,85,510	..	24,27,684	..	26,69,387	..
(x) Do. Sind ..	32,825	..	17,889	..	16,291	..
	20,18,335		24,45,573		26,85,678	
(xi) Expenditure on unmetalled Provincial roads for maintenance in the Presidency proper ..	2,53,711	..	2,35,632	..	2,83,378	..
(xii) Do. Sind ..	95,939	..	1,27,690	..	1,36,482	..
	3,49,650		3,63,322		4,19,860	

III.

Roads in the Presidency Proper and in Sind from 1921–22 to 1933–34.

1924–25		1925–26		1926–27		1927–28	
41-C.W. Provincial.	60-C.W.	41-C.W. Provincial.	60-C.W.	41-C.W. Provincial.	60-C.W.	41–C.W. Provincial.	60–C.W.
8	9	10	11	12	13	14	15
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
11,72,871	36,09,799	12,24,807	38,98,209	22,22,421	17,71,645	9,72,027	13,90,972
3,18,186	8,82,055	4,53,035	13,10,549	7,27,916	7,15,071	3,47,891	3,70,005
14,91,057	44,91,854	16,77,842	52,08,758	29,50,337	24,86,716	13,19,918	17,60,977
14,69,217	..	15,22,903	....	15,95,217	..	17,04,033	..
1,91,990	..	1,74,310	....	2,06,962	..	2,46,822	..
16,61,207		16,97,213		18,02,179		19,50,855	
5,36,719	24,18,810	8,30,136	11,41,309	11,19,552	4,09,201	7,95,102	5,26,052
26,685	1,39,015	—102	30,035	11,759	99,541	81,725	1,74,995
5,63,404	25,57,825	8,30,034	11,71,344	11,31,311	5,08,742	8,76,827	7,01,047
63,591	1,14,266	1,36,210	33,048	2,50,893	..	1,65,007	..
....	..	13,043	20,788	661	..	12,313	..
63,591	1,14,266	1,49,253	53,836	2,51,554		1,77,320	
27,73,938	..	28,80,514	....	30,98,552	..	32,12,327	..
13,996	..	24,444	....	78,629	..	57,076	..
27,87,934		29,04,958		31,77,181		32,69,403	
2,81,022	..	2,53,438	....	2,55,920	..	2,82,958	..
1,30,644	..	1,31,892	....	89,724	..	1,52,444	..
4,11,666		3,85,330		3,45,644		4,35,402	

APPENDIX

1	1928–29		1929–30	
	41–C.W. Provincial. 16	60–C.W. 17	41-C.W. Provincial. 18	60-C.W. 19
	Rs.	Rs.	Rs.	Rs.
(*i*) Expenditure on buildings for original works in the Presidency proper	9,61,174	19,07,442	8,88,923	22,83,762
(*ii*) Do. do. Sind ..	2,44,881	3,69,562	3,44,517	1,40,963
	12,06,055	22,77,004	12,33,440	24,24,725
(*iii*) Expenditure on buildings for maintenance in the Presidency proper ..	16,43,248	....	15,91,742	....
(*iv*) Do. do. Sind ..	2,07,847	....	2,88,022	....
	18,51,095		18,79,764	
(*v*) Expenditure on metalled Provincial roads for original works in the Presidency proper	7,40,068	5,42,195	5,81,922	5,41,635
(*vi*) Do. do. Sind ..	98,454	1,75,326	7,919	94,001
	8,38,522	7,17,521	5,89,841	6,35,636
(*vii*) Expenditure on unmetalled Provincial roads for original works in the Presidency proper	1,05,960	....	1,11,174	....
(*viii*) Do. do. Sind ..	9,172	....	1,400	....
	1,15,132		1,12,574	
(*ix*) Expenditure on metalled Provincial roads for maintenance in the Presidency proper .	30,99,797	....	30,95,981	....
(*x*) Do. do. Sind ..	65,883	....	96,560	....
	31,65,680		31,92,541	
(*xi*) Expenditure on unmetalled Provincial roads for maintenance in the Presidency proper	2,67,776	....	2,54,990	....
(*xii*) Do. do. Sind ..	1,26,654	....	1,57,922	....
	3,94,430		4,12,912	
(*xiii*) Expenditure from Road Development Fund in connection with Provincial roads for original works in the Presidency proper.	....	....	....	....
(*xiv*) Do. do. Sind ..	....	....	....	....
(*xv*) Expenditure from Road Development Fund in connection with Provincial roads for maintenance in the Presidency proper.	....	....	....	....
(*xvi*) Do. do. Sind ..	....	....	....	....

III—*contd.*

1930–31		1931–32		1932–33		1933–34	
41-C.W. Provincial.	60-C.W.	41-C.W. Provincial.	60-C.W.	41-C.W. Provincial.	60-C.W.	41-C.W. Provincial.	60-C.W.
20	21	22	23	24	25	26	27
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
7,15,423	4,32,192	2,38,311	20,397	2,51,734	1,339	2,46,766	11,002
2,16,733	1,22,058	3,47,375	5,20,146	1,03,412	5,376	76,846	32,580
9,32,156	5,54,250	5,85,686	5,40,543	3,55,146	6,715	3,23,612	43,582
15,54,193	..	13,73,726	....	9,88,704	..	11,83,317	..
2,47,047	..	1,61,565	....	1,54,454	..	2,31,756	..
18,01,240		15,35,291		11,43,158		14,15,073	
3,07,467	4,85,007	1,39,416	2,91,305	1,26,240	1,55,554	1,17,263	51,711
— 2	21,693	....	4,716	....	..	160	..
3,07,465	5,06,700	1,39,416	2,96,021	1,26,240	1,55,554	1,17,423	51,711
81,815	..	29,564	....	23,447	..	23,622	..
8,923	..	....	....	....	..	....	..
90,738		29,564		23,447		23,622	
29,37,136	..	28,68,480	....	23,36,968	..	24,82,335	..
55,688	..	61,862	....	63,413	..	71,446	..
29,92,824		29,30,342		24,00,381		25,53,781	
2,98,830	..	2,30,071	....	1,61,682	..	1,60,738	..
1,42,386	..	82,871	....	86,008	..	90,895	..
4,41,216		3,12,942		2,47,690		2,51,633	
3,00,076	..	7,35,418	....	9,06,785	..	8,08,461	..
....	..	4,82,195	....	6,51,927	..	3,38,345	..
3,00,076		12,17,613		15,58,712		11,46,806	
....	..	....	....	13,078	..	26,253	..
....	..	....	....	500	..	1,544	..
				13,578		27,797	

APPENDIX

Statement showing the expenditure on District Local Board Roads in the 1921-22

1	1921-22.* 2	1922-23. 3	1923-24. 4	1924-25. 5	1925-26. 6
	Rs.	Rs.	Rs.	Rs.	Rs.
(1) Expenditure on metalled District Local Board roads for original works in the Presidency proper	1,80,641	2,11,788	2,45,635	1,85,618	2,22,685
(2) Expenditure on metalled District Local Board roads for original works in Sind..	16,103	5,039	14,611	10,279	73,201
	1,96,744	2,16,827	2,60,246	1,95,897	2,95,886
(3) Expenditure on unmetalled District Local Board roads for original works in the Presidency proper	1,60,724†	94,250	1,28,734	1,17,791	1,78,703
(4) Expenditure on unmetalled District Local Board roads for original works in Sind..	98,877	42,321	49,660	40,897	78,637
	2,59,601	1,36,571	1,78,394	1,58,688	2,57,340
(5) Expenditure on metalled District Local Board roads for maintenance in the Presidency proper	4,51,946	5,68,794	5,44,584	5,68,349	6,21,726
(6) Expenditure on metalled District Local Board roads for maintenance in Sind ..	7,455	4,924	2,901	8,951	3,295
	4,59,401	5,73,718	5,47,485	5,77,300	6,25,021
(7) Expenditure on unmetalled District Local Board roads for maintenance in the Presidency proper	5,18,795	4,55,687	5,30,217	4,92,900	6,36,110
(8) Expenditure on unmetalled District Local Board roads for maintenance in Sind..	2,85,820	2,41,091	2,89,435	2,64,811	4,00,788
	8,04,615	6,96,778	8,19,652	7,57,711	10,36,898
(9) Expenditure on metalled and unmetalled District Local Board roads (original works and repairs) in the Ratnagiri District not included above ..	37,924	22,043	30,365	30,598	46,988
(10) Expenditure on metalled and unmetalled District Local Board roads (original works and repairs) in the Bijapur District not included above ..	..	..	..	..	....

*The figures in column 2 against items (1), (3), (5) and (7) do not include those

†This figure does not include the expenditure in the West Khandesh District as

IV.

Presidency proper and Sind (original works and repairs) from to 1933-34.

1926-27. 7	1927-28. 8	1928-29. 9	1929-30. 10	1930-31. 11	1931-32. 12	1932-33. 13	1933-34. 14
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
2,14,017	2,98,423	3,29,582	4,11,234	3,07,573	2,09,334	1,92,344	2,16,078
1,33,542	77,391	1,54,304	76,837	49,194	45,765	38,162	39,368
3,47,559	3,75,814	4,83,886	4,88,071	3,56,767	3,15,099	2,30,506	2,55,446
2,97,654	3,18,374	2,72,491	2,02,260	2,28,956	1,86,361	2,13,520	2,06,288
92,034	85,337	40,952	21,352	39,817	18,636	23,483	23,098
3,89,688	4,03,711	3,13,443	2,83,612	2,68,773	2,04,997	2,37,003	2,29,386
7,48,360	7,59,703	8,51,468	8,73,140	9,31,651	8,81,092	7,66,140	7,58,558
2,073	5,405	12,652	36,856	50,441	11,757	9,869	10,968
7,50,433	7,65,108	8,64,120	9,09,996	9,82,092	8,92,849	7,76,009	7,64,526
6,79,365	5,91,524	4,57,202	3,51,071	4,62,352	3,36,981	3,36,929	3,17,477
3,88,198	4,41,126	4,57,168	4,34,781	4,44,139	3,58,065	3,06,622	3,57,848
10,67,563	10,32,650	9,14,370	7,85,852	9,06,491	6,95,046	6,43,551	6,75,325
36,010	38,379	41,785	57,594	....	....	..	....
..	....	..	92,233	....	....	..	....

for the Sholapur District as the Commissioner reports that they are not available.
the Commissioner reports that the information is not available.

APPENDIX

Statement showing expenditure on establishment in the Roads and Buildings and percentage on the total outlay on works and

Year	Expenditure on Establishment in the Roads and Buildings Branch						
	41—Civil Works—Provincial (Transferred and Reserved)	60—Civil Works	41—Civil Works—Central	50—Military Works	Deposit Works	Total	Percentage on the total outlay on works and repairs in the Roads and Buildings Branch
1	2	3	4	5	6	7	8
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
1921-22 ..	29,06,955	..	1,98,683	45,258	2,84,992	34,35,888	19·26
1922-23 ..	20,14,640	8,34,450	1,78,163	71,481	77,143	31,75,877	20·79
1923-24 ..	15,84,488	8,10,645	67,892	38,560	6,88,354	31,89,939	19·88
1924-25 ..	16,89,892	12,25,632	1,19,721	27,862	2,52,556	33,15,663	19·67
1925-26 ..	18,89,417	12,05,078	1,01,876	69,049	2,58,535	35,23,955	20·66
1926-27 ..	25,30,286	5,97,486	1,68,896	5,882	3,94,389	36,96,939	23·76
1927-28 ..	21,99,448	5,59,107	1,49,132	5,042	2,97,270	32,09,999	24·96
1928-29 ..	22,40,393	6,56,713	2,29,540	2,240	2,56,180	33,85,066	25·03
1929-30 ..	22,45,450	7,33,867	1,56,773	3,638	2,34,897	33,74,625	25·26
1930-31 ..	25,51,711	1,80,139	1,72,163	2,415	85,444	29,91,872	32·35
1931-32 ..	25,93,104	2,32,929	1,22,799	3,182	44,132	29,96,146	38·70
1932-33 ..	23,74,603	71,981	85,143	3,334	17,156	25,52,217	39·79
1933-34 ..	22,73,945	31,807	71,866	3,810	30,502	24,11,930	37·97

NOTE.—The percentage of the establishment charges on the cost of works and repairs in the (column 8). The reason is largely that the establishment charges in the Irrigation Branch include certain canal systems in Sind and the Deccan which has no connection with the execution of works spent on revenue management including the *control and distribution of water*, which is debited in the ment charges debited in the accounts to "revenue management" are deducted from the total cost so divergent. The increase in the rate per cent. in the R. & B. Branch is mainly due to decrease in which expenditure on works is reduced. A more overall percentage on expenditure on works is

V.

the Irrigation Branches of the P. W. D. from the year 1921–22 *to* 1933–34 *and repairs during that period in both the Branches.*

Expenditure on Establishment in the Irrigation Branch						Total Establishment charges in the Roads and Buildings and Irrigation Branches	Percentage on the total outlay of works and repairs in Roads and Buildings and Irrigation Branches
55—Construction of Irrigation, Navigation, Embankment and Drainage Works	XIII-Works for which capital accounts are kept	15—Other Revenue Expenditure financed from Ordinary Revenues	Deposit Works	Total establishment charges	Percentage on the total outlay on works and repairs in the Irrigation Branch		
9	10	11	12	13	14	15	16
Rs.	Rs.	Rs.	Rs.	Rs.		Rs.	
11,53,734	13,85,960	6,68,651	2,770	32,11,115	33·59	66,47,003	24·26
14,20,751	13,44,001	5,34,327	1,903	33,01,972	32·22	64,77,849	25·38
21,87,793	14,43,222	4,32,013	2,056	40,65,084	33·89	72,55,023	25·87
20,10,785	17,37,724	5,26,361	492	51,75,362	28·73	84,91,025	24·35
32,21,047	17,99,343	5,19,228	2,081	55,42,899	21·62	90,66,854	21·23
35,56,959	18,03,385	5,94,989	3,207	59,03,540	30·56	96,00,479	27·54
36,98,956	19,20,773	7,80,312	3,847	64,03,888	26·00	96,13,887	25·04
39,04,670	21,35,939	6,16,601	2,750	66,59,960	25·51	1,00,45,026	25·35
42,26,873	21,08,302	6,18,312	1,012	69,54,499	23·26	1,03,29,124	23·88
42,88,966	18,81,149	5,99,621	1,734	67,21,470	21·60	97,13,342	24·06
40,37,072	16,34,011	5,18,627	86	61,90,606	22·40	91,86,842	25·97
28,70,427	23,53,971	4,01,329	680	56,26,407	28·54	81,78,024	31·30
17,00,000	29,83,581	5,14,407	48,960	53,06,988	40·41	77,18,918	39·61

Irrigation Branch (column 14) is generally higher than that in the Roads and Buildings Branch the cost of Special Revenue Establishment employed entirely on "revenue management" work on and repairs, and that these charges also include cost of part of the time of Irrigation establishment accounts to "revenue management" and not to execution of works and repairs. If these establish- of establishment in the Irrigation Branch the percentage on the cost of works and repairs will not be outlay on "works" and "repairs". Establishment charges cannot be reduced in the same ratio in inaccurate.

APPENDIX VI.

List of members of the Standing Advisory Committee for the Back Bay Reclamation Scheme for the year 1933–34.

	Name of Member.	Constituency.
1.	Sir Joseph Kay, Kt. (Chairman) ..	.. The Bombay Chamber of Commerce.
2.	Mr. Manu Subedar	.. Indian Merchants' Chamber.
3.	Mr. J. B. Petit, M.L.C.	.. Millowners' Association, Bombay.
4.	Mr. Hooseinbhoy A. Lalljee ..	.. The Bombay Municipal Corporation.
5.	Mr. G. E. Bennett, M.Sc., M.Inst.C.E., Chief Engineer, Bombay Port Trust.	Nominated by Government.
6.	Mr. T. K. Roddan, City Engineer, Bombay Municipality.	
7.	Mr. F. H. Taylor, F.S.I., M.R.S.I., Manager, Land and Bunders, Bombay Port Trust.	
8.	Mr. K. S. Framji, C.I.E.	

BOMBAY : PRINTED AT THE GOVERNMENT CENTRAL PRESS.

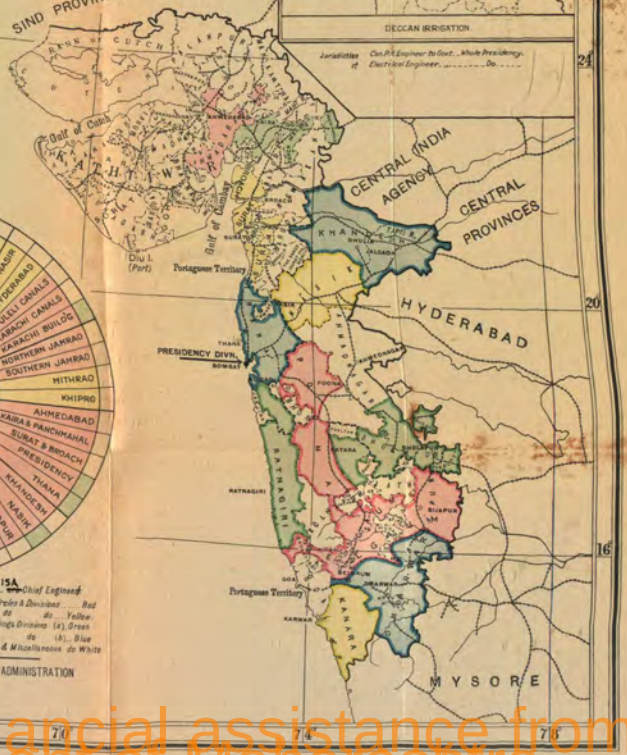
BOMBAY PRESIDENCY

PUBLIC WORKS DEPARTMENT

DIVISION MAP

1933-34.

Scale — 105 Miles to 1 Inch.



DECCAN IRRIGATION.

Jurisdiction of Con. P.W. Engineer to Govt. ... Whole Presidency.
Electrical Engineer. ... Do. ...

Secretary & Joint Secretary ..... 15A Chief Engineer

Administrative Zone 'A' ..... } have
Executive Division Zone 'B' ..... }
Zone 'C' shows nature } — as follows —
of Executive Division in
Zone 'B'

Permanent Circles & Divisions ... Red
Temporary do do ... Yellow.
Road & Buildings Divisions (a), Green
Irrigation do (b), Blue
Mixed a. & b. & Miscellaneous do White

DIAGRAM SHOWING PUBLIC WORKS DEPARTMENT ADMINISTRATION

(2-116) Govt. Photozinco. Office, Poona, 1934.

gitized with financial assistance from th
Government of Maharashtra
on 22 July 2017

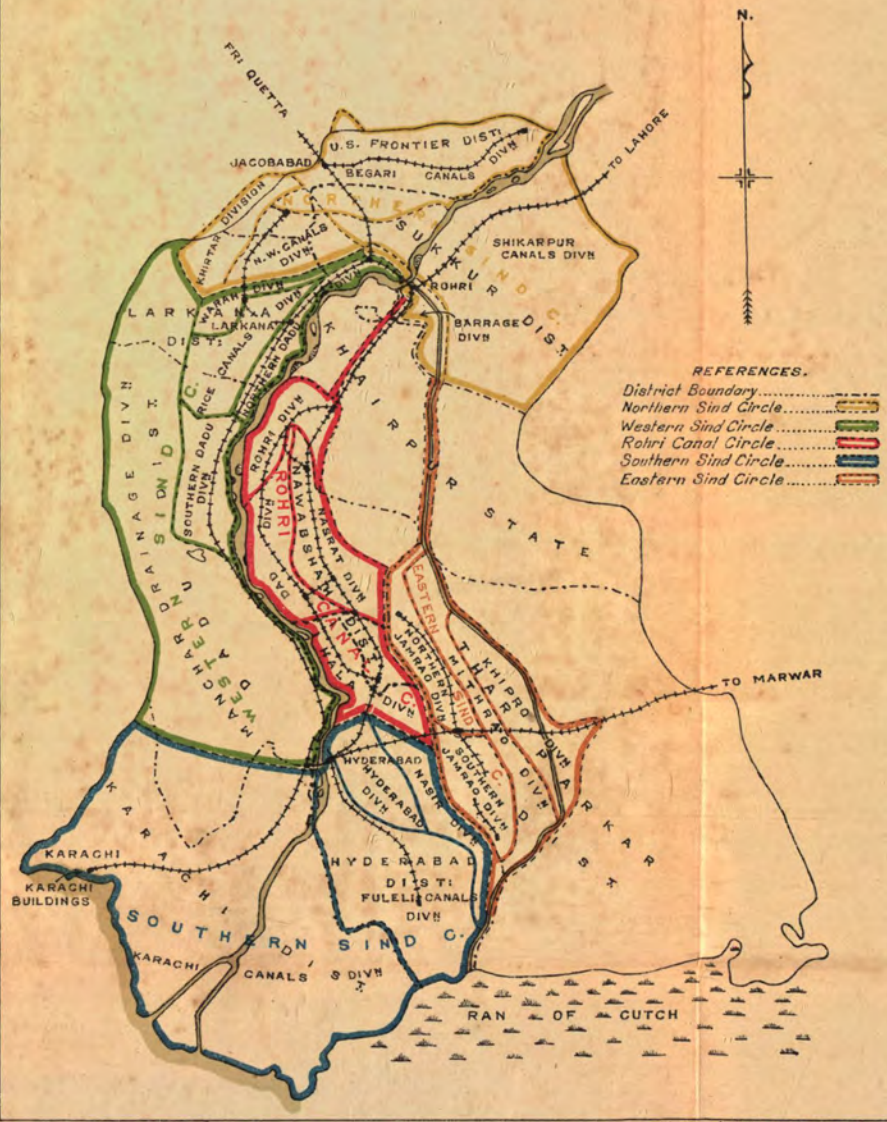
MAP OF SIND

SHOWING

PUBLIC WORKS DEPARTMENT DIVISIONS.

1933-34

Scale 50 Miles = 1 Inch.



(L.260) G.P.E.O. POONA, 1935.